

CLAIMS

What is claimed is:

1. A semiconductor device package comprising:
 - a semiconductor device affixed to an upper surface of a substrate, the semiconductor device having an upper surface;
 - a mold cap covering at least the upper surface of the semiconductor device, the mold cap having an upper surface;
 - a heat spreader affixed to at least a portion of the upper surface of the mold cap.
2. The package of claim 1 wherein the semiconductor device is electrically connected to the substrate by wire bonds, and wherein the mold cap covers at least the upper surface of the substrate and the wire bonds.
3. The package of claim 1 wherein a portion of the heat spreader lying overlying the semiconductor device protrudes downward toward the upper surface of the semiconductor device, and a corresponding portion of the mold cap is thinner between the upper surface of the semiconductor device and the heat spreader than more peripherally.
4. The package of claim 3 wherein the downwardly protruding portion of the heat spreader has a generally square shape in plan view.
5. The package of claim 3 wherein the downwardly protruding portion of the heat spreader has a generally rectangular shape in plan view.
6. The package of claim 3 wherein the downwardly protruding portion of the heat spreader has a generally round shape in plan view.
7. The package of claim 3 wherein the downwardly protruding portion of the heat spreader has a generally rectangular shape in transverse sectional view.
8. The package of claim 3 wherein the downwardly protruding portion of the heat spreader has a generally trapezoidal shape in transverse sectional view.
9. The package of claim 1 in which the height from the substrate to the top of the package is less than or equal to about 1.17 mm.